New wafer grinding machine

Engis (UK) has launched its small footprint, EHG-150AV horizontal grinder, with a full suite of accessories. It is particularly suited to individual and small quantity wafer grinding, and offers thickness control presets, +/- micron size/parallel accuracy using independent wafer and wheel spindles.

The grinder offers automatic sizing and 3-way motion to provide reduced surface and subsurface damage and edge-chipping, providing an increased yield in operation. It also offers a choice of either a vacuum or magnetic chuck, with quick release feature, as well as a lighted work area with see-through splash cover. The operator panel is intuitive and easy to use, with full control over the grinding wheel, work and oscillation functions. Separate chuck feeding and spark-out time displays have been integrated into the design as well as a thickness start/stop sizing/removal preset and readout.

Engis' EHG-150AV horizontal grinder.

EHG-150AV horizontal spindle grinder comes as standard with a 50 litre capacity coolant pump, and a 25W motor. It provides high output capability, with non-corrosive construction in a compact footprint.

Machine specifications: Maximum 150 mm diameter x 50 mm thick work; Maximum 150 mm grinding wheel; 200-980 rpm wheel rotation variable speed; 200-600 rpm part rotation; Oscillation stroke: +/120 mm; Grinding wheel motor: 0.75 kW; Work Motor: 0.2 kW; Machine dimensions: 50"w x 30"d x 60"h; Coolant pump reservoir: 26"w x 13"d x 22"h.

Next generation hydrogen purifiers launched

Power and Energy Inc (P+E) has introduced its next generation PE9000S series purifiers. The series system provides users with a supply of Ultra-Pure Hydrogen (UPH) containing less than 1 part per billion total impurities. This UPH gas is typically used in the manufacture of advanced semiconductor devices such as LEDs, laser diodes and silicon carbide semiconductors. Models offer capacities ranging from 30 liters per minute up to 650 liters per minute (2 cubic meters per hour up to 40 cubic meters per hour) of ultra pure hydrogen. Multi-unit configurations are available for even greater capacity and redundancy.

The series offers most of the features found in P+E's bulk system, including P+E's next generation P130 control systems with PC-based centralised monitoring and control software. The software allows remote monitoring and control of the purifier system over LAN-connected PCs. The counterflow heat exchanger minimises power consumption and ensures that incoming hydrogen is preheated to process temperature.

Furthermore, the PE9000S series includes integrated ports and software for helium leak detection of the system.

For details, contact:

Albert Stubbmann

Tel: +1 215 942 4600, ext 17

E-mail: al.s@powerandenergy.com

www.powerandenergy.com

Beating the p-GaN challenge

Accent Optical Technologies has launched a novel etch process for electrochemical CV carrier concentration profiling of p-doped GaN.

Achieving a high concentration of holes in p-type GaN is critical in the manufacture of HB-LEDs or UV lasers for next-generation DVD players. Conventional metrology methods, such as SIMS, measure only the chemical concentration of the dopant species, but do not measure the electrically-active carrier concentration. The chemical and electrically-active concentrations can differ in p-GaN by more than an order of magnitude. In contrast, ECV profiling directly measures the electrically active carrier concentration, which directly influences key performance parameters such as forward voltage and contact resistance.

Tom Ryan, Accent's product manager for compound semiconductor products, said: "We have been able to etch and profile n-GaN for some time now but p-GaN has been a challenge because of the behavior of Mg as a deep-level acceptor and the high defect density of GaN materials. Our new method produces a flat and consistent etch profile that enables ECV profiling of complete device structures, and should be of enormous value both as a process control tool in manufacturing and as a development tool in optimizing the Mg activation process."